

Date: Monday, 12/01/2009 2:34:13 PM  
User: Julie Dawson

# Process Sheet

<b>Customer</b> :	CU-DAR001 Dart Helicopters Services	<b>Drawing Name</b> :	SHUT-OFF VALVE SHAFT	
<b>Job Number</b> :	44615	<b>Part Number</b> :	D34691	
<b>Estimate Number</b> :	12181	<b>Drawing Number</b> :	D3469 REV.A1	
<b>P.O. Number</b> :		<b>Project Number</b> :	N/A	
<b>This Issue</b> :	12/01/2009	<b>S.O. No.</b> :		
<b>Prsht Rev.</b> :	NC	<b>Drawing Revision</b> :	A1	
<b>First Issue</b> :	/ /	<b>Type</b> :	PURCHASED PARTS	
<b>Previous Run</b> :	36217	<b>Material</b> :		
<b>Written By</b> :		<b>Due Date</b> :	30/01/2009	<b>Qty:</b> 4 <b>Um:</b> Each
<b>Checked &amp; Approved By</b> :	JWD 09.01.12			
<b>Comment</b> :	est rev A 06.02.06 new issue EC			

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	M304S26GA	304/316 0.018 SHEET
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**Comment:** Qty.: 0.8259 sf(s)/Unit Total : 3.3037 sf(s)  
AISI 304/316 0.018 SHEET batch: M109398

09/01/12

2.0	SHEAR	SHEAR
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**Comment:** SHEAR  
Cut flat pattern per dwg D3469 & Deburr if nessary

09/01/12

3.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1
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**Comment:** SMALL & MEDIUM FAB RESOURCE 1  
1- Drill holes and deburr as per dwg D3469  
2-Roll sheet as per dwg D3469  
3-Spot weld as per dwg D3469  
4-Roll Bead as per dwg D3469

09/03/02 (4)

4.0	QC11	VISUAL INSPECTION OF SPOT WELDING
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**Comment:** VISUAL INSPECTION OF SPOT WELDING

09/03/03 (4)

5.0	QC5	INSPECT WORK TO CURRENT STEP
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**Comment:** INSPECT WORK TO CURRENT STEP

09/03/03 (4)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Monday, 12/01/2009 2:34:13 PM  
User: Julie Dawson

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SHUT-OFF VALVE SHAFT

Job Number: 44615

Part Number: D34691

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

PACKAGING 1

PACKAGING RESOURCE #1



CV

Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: 153

9/3/4

SV

7.0

QC21

FINAL INSPECTION/W/O RELEASE



09/03/05

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



U 91.03.04

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

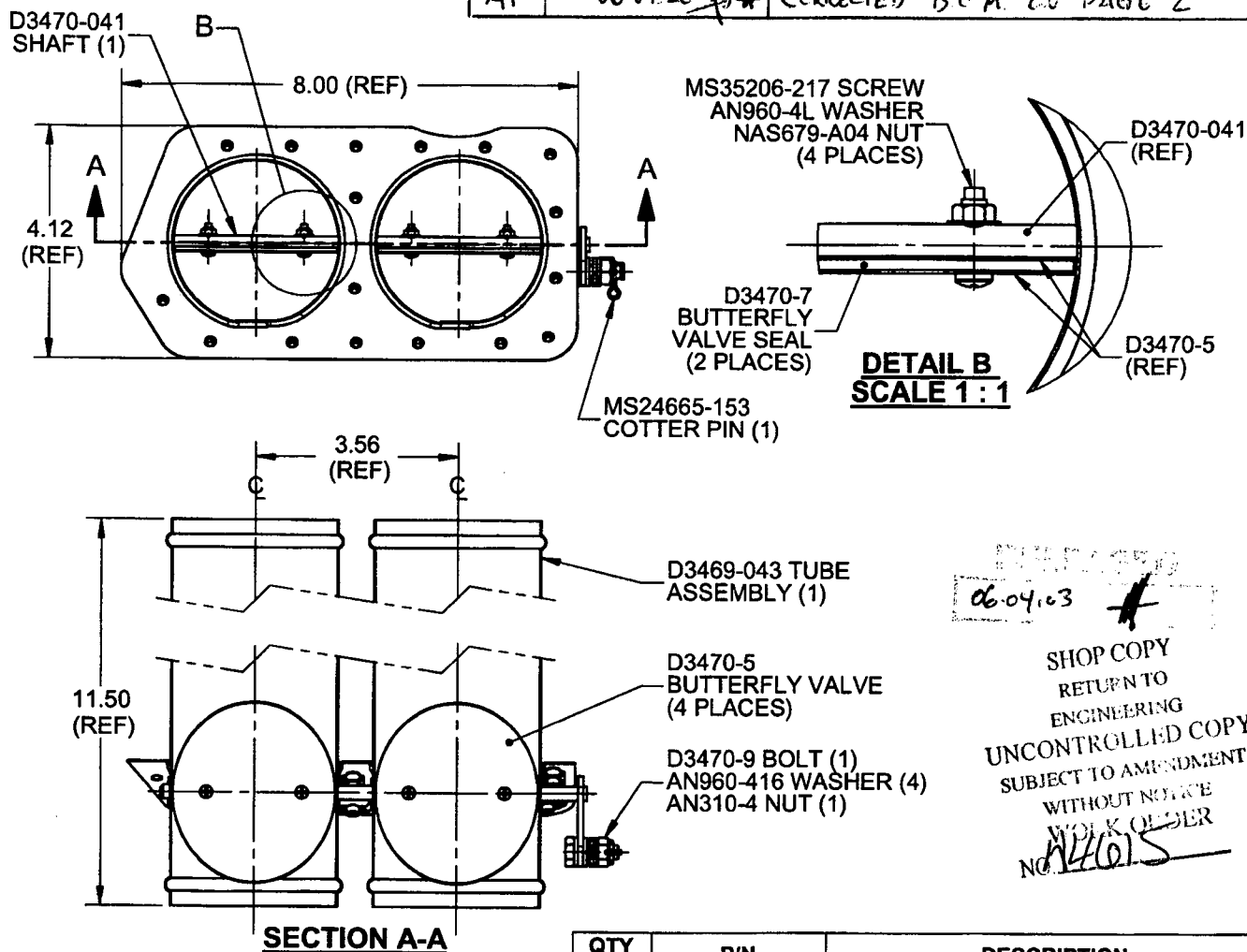
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**DART**

DESIGN <i>B</i>	DRAWN BY <i>B</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>H</i>	APPROVED <i>H</i>	DRAWING NO. <b>D3469</b>	REV. A SHEET 1 OF 5
DATE <b>05.12.12</b>		TITLE <b>SHUT-OFF VALVE ASS'Y</b>	SCALE 1:3
A	05.12.12	NEW ISSUE	
A1	06.04.20	CORRECTED B.O.M. ON PAGE 2	

**D3469-041 SHUT-OFF VALVE ASS'Y****NOTES:**

- 1) IDENTIFY WITH DART P/N D3469-041 USING FINE POINT PERMANENT INK MARKER
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.010

QTY -041	P/N	DESCRIPTION
X	D3469-041	SHUT-OFF VALVE ASSEMBLY
1	D3469-043	TUBE ASSEMBLY
1	D3470-041	SHUT-OFF VALVE SHAFT
4	D3470-5	BUTTERFLY VALVE
2	D3470-7	BUTTERFLY VALVE SEAL
1	D3470-9	BOLT
1	AN310-4	NUT
4	AN960-4L	WASHER
4	AN960-416	WASHER
1	MS24665-153	COTTER PIN
4	MS35206-217	SCREW
4	NAS679-A04	NUT

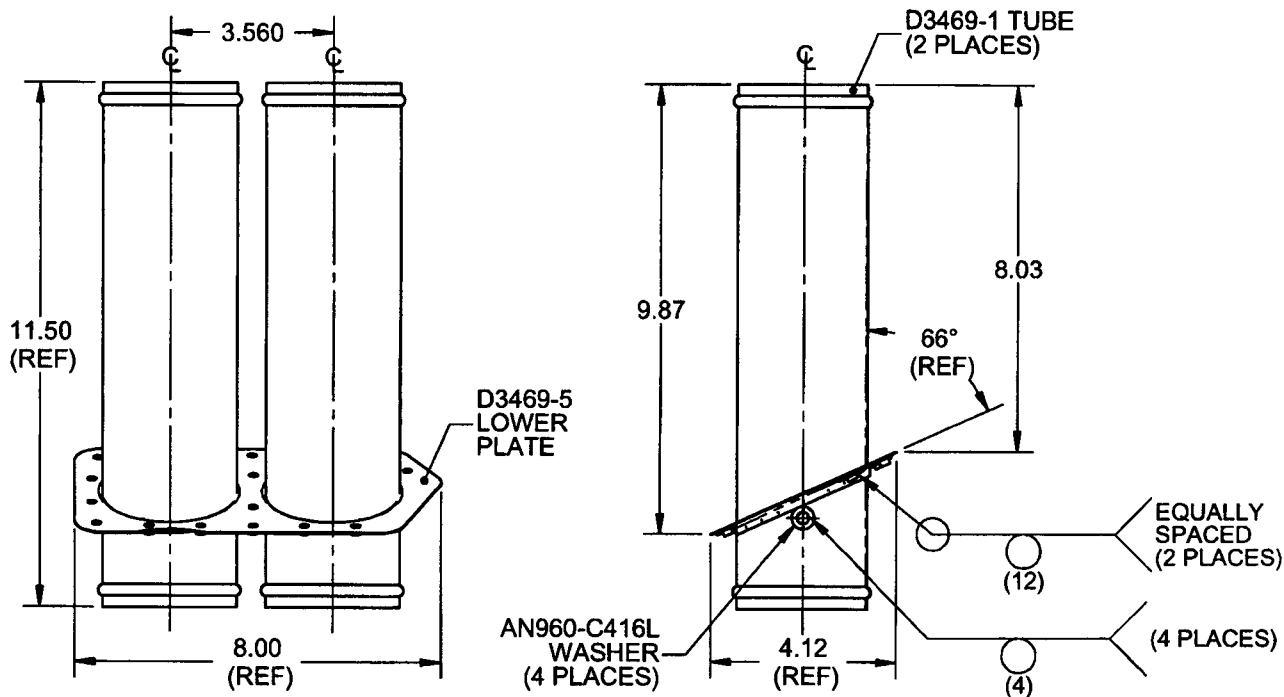
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CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3469	REV. A SHEET 2 OF 5
DATE 05.12.12		TITLE SHUT-OFF VALVE ASS'Y	SCALE 1:4

RELEASED  
# 06.04.03



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WITHOUT NOTICE  
WORK ORDER  
NO. *h4615*

### D3469-043 TUBE ASSEMBLY

#### NOTES:

- 1) SPOT WELD PER DART QSI 004
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.010

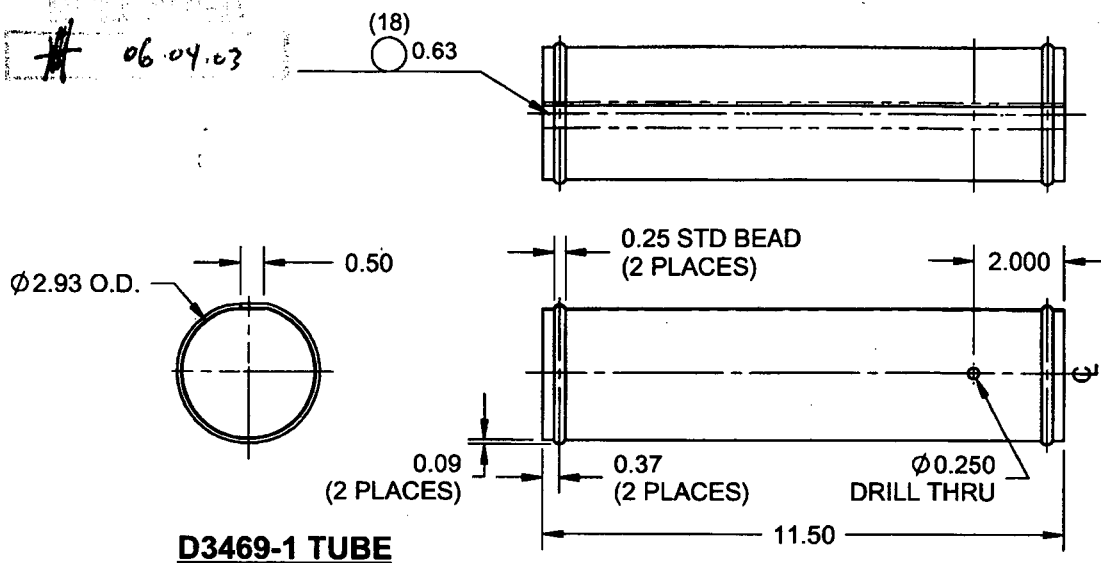
QTY -043	P/N	DESCRIPTION
X	D3469-043	TUBE ASSEMBLY
2	D3469-1	TUBE
1	D3469-5	LOWER PLATE
4	D3470-5	PLATE VALVE
4	AN960-C416L	WASHER

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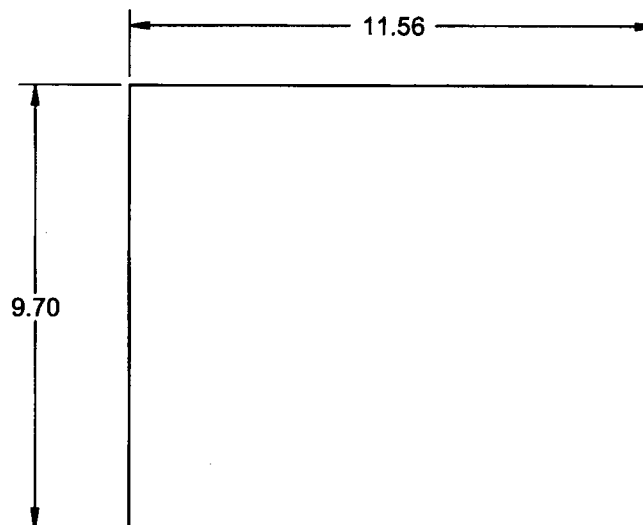
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DATE <b>05.12.12</b>		TITLE <b>SHUT-OFF VALVE ASS'Y</b>	SCALE 1:4



**D3469-1 TUBE**



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NO. 16465

**D3469-1F TUBE FLAT PATTERN**

**NOTES:**

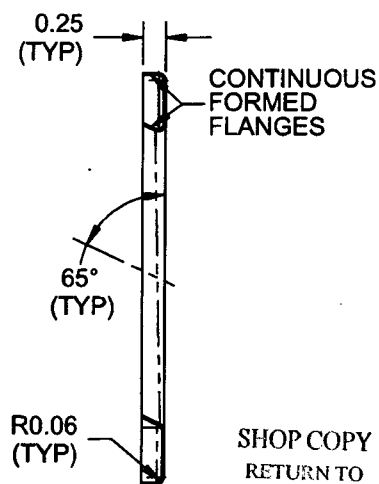
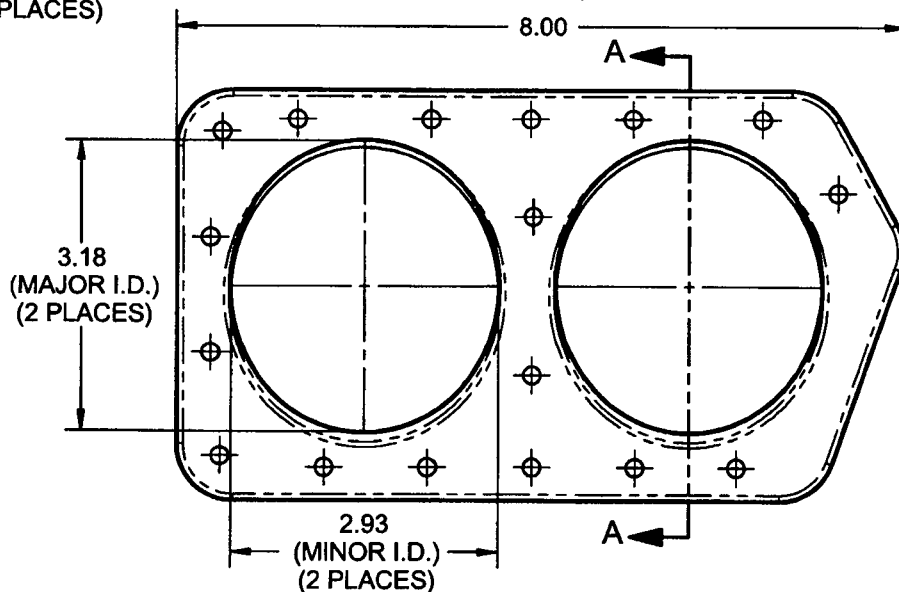
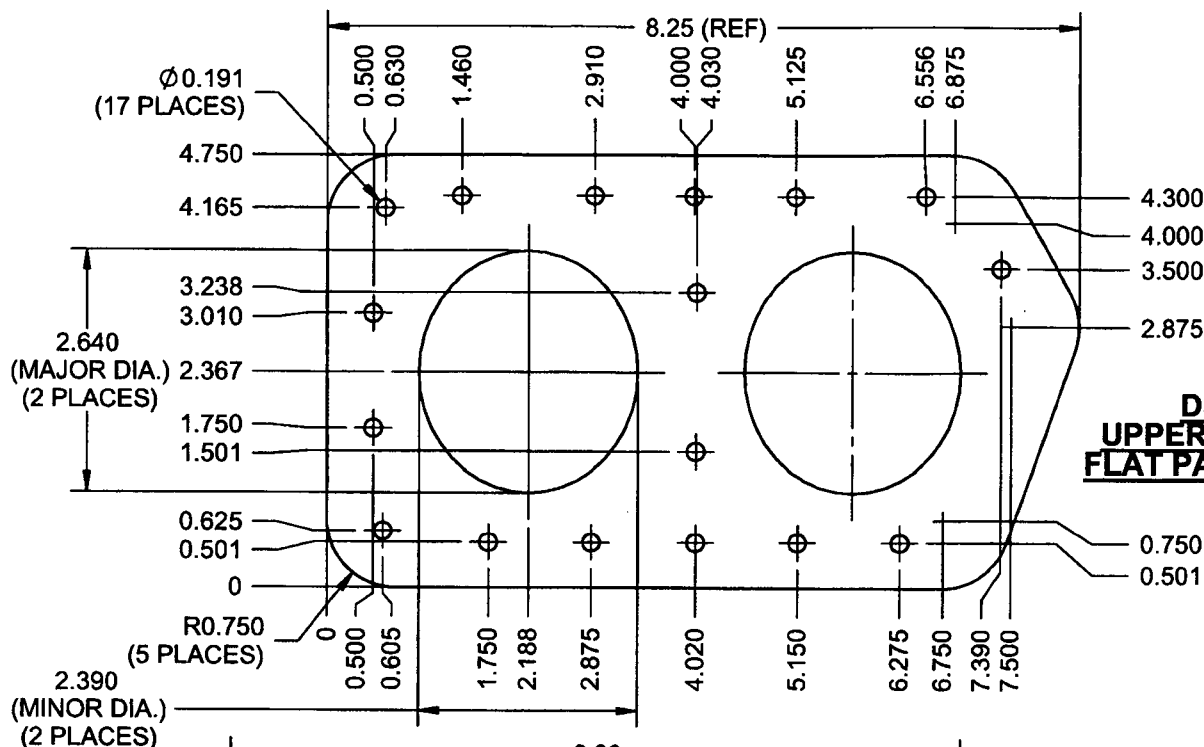
- 1) MATERIAL: AISI 304/316 SS SHEET PER MIL-S-5019 (ANNEALED) 2B FINISH  
26 GAUGE SS (0.018 THICK)  
(REF. DART SPEC. M304S26GA)
- 2) SPOT WELD PER DART QSI 004
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.010

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DATE <b>05.12.12</b>		TITLE <b>SHUT-OFF VALVE ASS'Y</b>	SCALE 1:2



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WORK ORDER NO. *44615*

### D3469-3 UPPER PLATE BENDING DETAIL

#### NOTES:

- 1) MATERIAL: AISI 304/316 SS SHEET PER MIL-S-5019 (ANNEALED) 2B FINISH  
26 GAUGE SS (0.018 THICK) (REF. DART SPEC. M304S26GA)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) FINISH: NONE
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.010

RELEASED

# 06-07-03

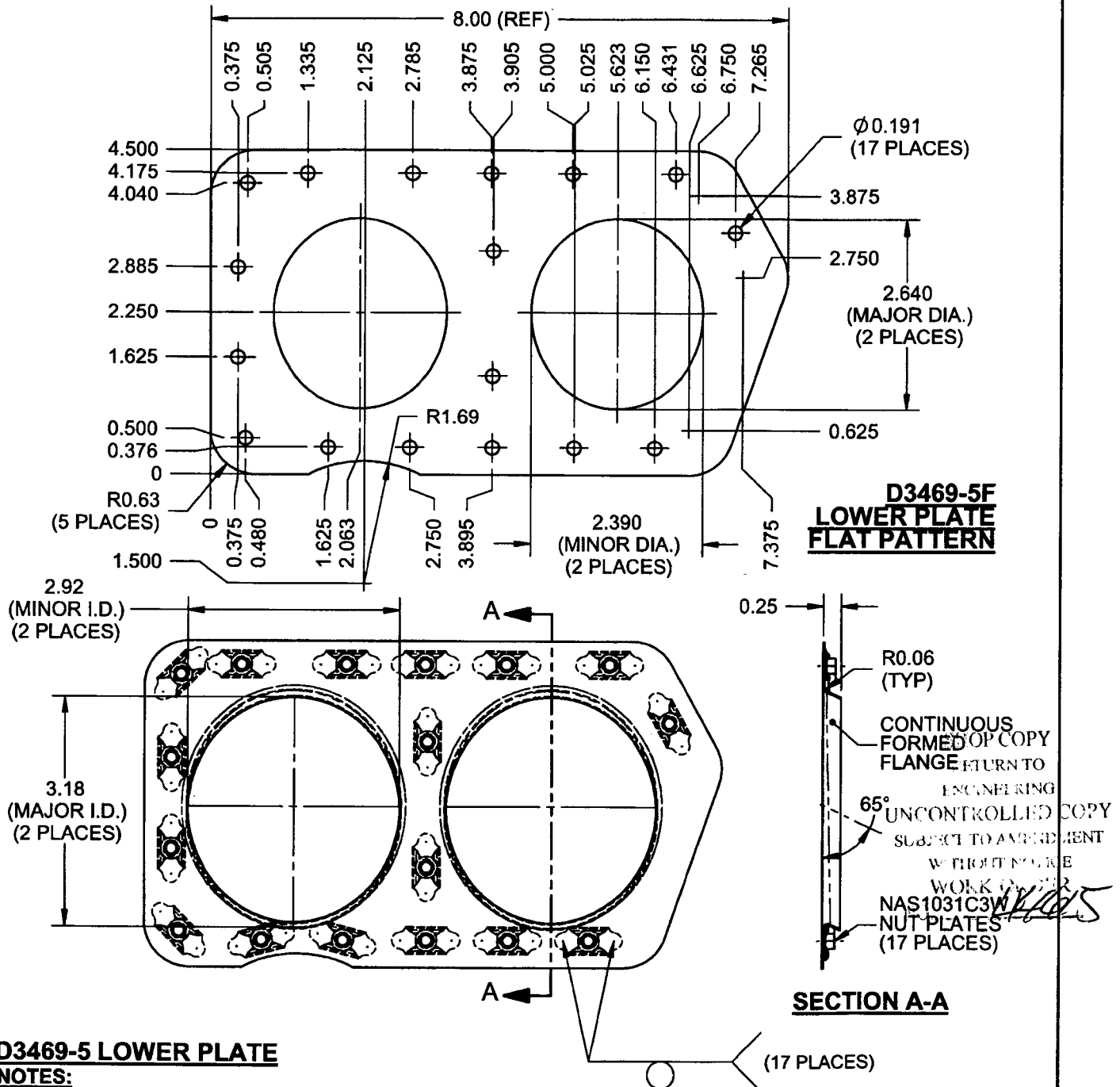
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CHECKED H	APPROVED H	DRAWING NO. <b>D3469</b>	REV. A SHEET 5 OF 5
DATE <b>05.12.12</b>		TITLE <b>SHUT-OFF VALVE ASS'Y</b>	SCALE 1:2



**D3469-5 LOWER PLATE**  
**NOTES:**

- 1) MATERIAL: AISI 304/316 SS SHEET PER MIL-S-5019 (ANNEALED) 2B FINISH 26 GAUGE SS (0.018 THICK) (REF. DART SPEC. M304S26GA)
- 2) SPOT WELD NUT PLATES PER DART QSI 004
- 3) FINISH: NONE
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) BREAK ALL SHARP EDGES 0.005 TO 0.010

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# SPOT WELD TEST RECORD

AMS-W-6858A

CLASS 'C'

TEST NO#: 60

EMPLOYEE: Frans Franka

PART NUMBER: D3469-1

JOB NUMBER: B44615

MATERIAL TYPE: 304L

MATERIAL THICKNESS: .013

GROUP SPECIFICATION



Group 1: Aluminum & magnesium



Group 2: Iron; nickel; cobalt



Group 3: Titanium SS

## TEST RESULTS

	PASS	FAIL
VISUAL:	[ <input checked="" type="checkbox"/> ]	[ <input type="checkbox"/> ]
PENETRATION:	[ <input checked="" type="checkbox"/> ]	[ <input type="checkbox"/> ]
PULL STRENGTH:	[ <input checked="" type="checkbox"/> ]	[ <input type="checkbox"/> ]

PSI Reading: \_\_\_\_\_

Qualified in accordance with standard AMS-W-6858A and QSI 004 (ref: 4.3)

DATE OF TEST COUPON: 09/03/03

QUALIFIER: SB